A multivariate analysis of psychosocial risk factors in pediatric transplant patients

Sarah Ashley MS2; Arun Chandnani, MD; Zachary Arcona, PsyD; Elizabeth Steinberg Christofferson, PhD; Kara Monnin, PhD, Carter Sevick, MS, Vijaya Vemulakonda, MD; Jonathan Walker, MD; Margret Bock, MD; Cindy Buchanan, PhD

Pediatric Urology Research Enterprise (PURE), Children’s Hospital Colorado, Division of Urology, Department of Surgery, University of Colorado Anschutz Medical Campus, Aurora, CO

BACKGROUND

• The Pediatric Transplant Rating Instrument (P-TRI) is a validated 17-item rating scale that assess overall risk, illness related factors, treatment adherence, psychiatric history, substance use history, family environment, and logistical barriers that may impact transplant success
• Treatment non-adherence is one of the leading causes of graft rejection and re-transplantation

Objective: Understand how medical diagnostic, treatment factors, and patient psychosocial factors impact risk and treatment adherence during pre-transplant evaluation

METHODS

• Retrospective chart review of 177 pediatric transplant candidates between 2013-2021
• Diagnostic categories: CAKUT, Primary renal, Syndromic neurogenic bladder
• Study analyzed pretransplant PTRI scores, demographic data, dialysis and catheterization status at time of evaluation

RESULTS

• Moderate evidence that patients who catheterized had lower adherence scores on the PTRI compared to those who did not (OR 0.46, p=0.021)
• Primary renal patients were more likely to be at risk for psychiatric concerns compared to CAKUT patients (OR 1.96; CI=1.06-3.66; p=0.046)
• See Data Images & Analysis section for further results

CONCLUSIONS

• Treatment adherence has significant impacts on graft outcomes and early interventions for psychosocial risk factors is essential
• Catheterization status, dialysis status, age, and initial diagnosis may affect adherence
• Primary renal patients were found to have more psychiatric risk factors compared to CAKUT patients and may benefit from additional mental health support
• Hispanic non-English speaking patients and patients with public insurance are more at risk of not having sufficient knowledge about transplant

Main Points & Key Takeaway

• Patients who self-catheterize have more adherence risk factors
• Patients not on dialysis and older patients have more adherence risk factors
• Primary renal patients have more psychiatric risk factors compared to CAKUT patients
• Hispanic non-English speaking patients and patients with public insurance are more at risk of not having sufficient knowledge about transplant

DATA IMAGES & ANALYSIS

Adherence subscale by catheterization status

Adherence of patients on dialysis and each year of life

Comparison | Adherence scores | P-value
---|---|---
Pts on dialysis vs not on dialysis | ↑ | 0.067
Of the patients on dialysis: CAKUT pts vs primary renal pts | ↑ | 0.082
Each additional year of life | ↓ | 0.001

Knowledge about transplant Multivariate analysis

Comparison | Risk | OR | P-value
---|---|---|---
Hispanic non-English speaking vs non-Hispanic English speaking | ↑ | 3.4 | 0.067
Public vs private insurance | ↑ | 3.8 | 0.082

Scan QR code for link to abstract

sarah.ashley@cuanschutz.edu

- No financial disclosures